

Translation of French Patent Document No. 1,404,299

Inventor and Applicant: Nikola Stamatov

Int. Class: B05

Application Date: August 17, 1964

Publication Date: May 17, 1965

Priority Document: N/A

Original French Title: Dispositif pour pulvériser ou projeter des liquides.

DEVICE FOR ATOMIZING OR SPRAYING LIQUIDS

Devices have previously been proposed for atomizing or spraying liquids wherein the container for the liquid is made of an elastic material, and the liquid is introduced under pressure into the container. A spraying tube is subsequently attached to this container in such a way that the product being projected, for example, water, is expelled from this elastic container by the contraction of the same.

The drawback of the device is that only a certain portion of the liquid can flow from the container and that, expulsion is determined by the elasticity of the container.

The present invention relates to a device for atomizing and spraying liquid and allows in a simple manner to expel the liquid under pressure from any container without the container having to be placed in a predefined position.

In accordance with the present invention, this result is obtained with a closed container and owing to the fact that, on one side, the upper portion of this container is provided with a discharge fitting to which a tube is connected; this tube is directed toward the outside and is equipped with a stop valve; and at the free end, the hose is

equipped with a spray or atomizer nozzle. In the region of this fitting a tube is attached, which is open on the bottom, and is directed to the inside and extends approximately to the bottom of the container. On the other side of the container is a filler fitting comprising a check valve to which the filler hose from a compressed air pump for automobile tires or the like can be attached.

An exemplary embodiment of the invention is illustrated in the drawing in which.

Fig. 1 is an elevated, partially cutout view of the inventive device;

Fig. 2 is a cross-sectional view through the discharge fitting;

Fig. 3 is a cross-sectional view through the filler fitting comprising a check valve.

The container 1 may be a baby bottle or any other closed pressure-resistant container comprising a handle 2. A discharge fitting 3 and a filler fitting 4 are arranged on the upper portion.

The discharge fitting accommodates a spray or atomizing hose 5 which may be provided, if needed, in the vicinity of the discharge fitting and, if needed, is provided at the end with stop valves 6 and 6a. At the free end of the hose is an atomizing or spray nozzle. It will be understood that the nozzle or spray gun may be replaced with a brush, a sponge, a showerhead or the like. A tube 8, which is open on the bottom, and which extends down to nearly the bottom 9 of the container, extends from the discharge fitting to the inside of the container. Furthermore, as already mentioned, the upper portion is equipped with the filler fitting 4 to which a hose 10 may be connected and joined with a compressed air pump, a compressor, an air pump for automobile tires, or any other source of compressed air. As illustrated in the cross-sectional view of the fitting 3 in Fig. 2, the

fitting is affixed to the container 1 and is provided with a threaded cap 11 with a central hole 12 in which an intermediary sealing ring 16 is affixed with two nuts 14 and 15 to the end of the intermediary tube with the external thread 13. Furthermore, on the inside of the threaded cap, another sealing ring 4 may be arranged which cooperates with the front face 18 of the fitting 3. The spray tube 5 is affixed to the external end of the intermediary tube 13, while the tube 8, which extends into the vicinity of the bottom of the container, is affixed to the inside end.

The filler fitting 4, a cross-section of which is illustrated in Figure 3, is provided at one end with a clamp 19, which is affixed inside the hole 23 in the wall of the container 1, by way of an interposed sealing washer 20, the nut 21 and, if needed, another sealing washer 20. The described attachment is preferably covered with a cap 24, which is tightened with a nut 25.

At the free end of the filler fitting is a check valve 27, which operates by means of a ball 26, and which is affixed by a nut to the threaded cap 28 on the filler fitting 4: a threaded fitting 30 which serves to attach the filler hose 10 illustrated in Fig. 1.

The spraying process is effected in the following manner: After the discharge fitting is screwed off, the container is filled with water or another liquid. Then, air is pumped into the container from any suitable compressed air source through the filler fitting 4, with the pressure being controlled as a function of the selected pressure generator. The container thus plays the rôle of an air tank. When the valves 6 open, the liquid can flow under pressure out of the container, through the hose 5, and ultimately through the spray nozzle 7.

The advantage of the novel device is that any type of container, especially those made of a synthetic material or plastic, may be used. The field of application of the device is extremely varied. For example, it may be employed for washing cars, providing water for camping, or other purposes. A compressed air tank may also be used to supply the compressed air.

CLAIMS

1. Device for atomizing or spraying liquids, characterized in that a container, preferably made of a synthetic or plastic material, is equipped on one side on the upper portion of this container with a discharge fitting to which a tube is connected; said tube is directed toward the outside and is equipped with a check valve; and at the free end, the hose is equipped with a spray or atomizer nozzle; said fitting is also equipped with a tube which is open on the bottom and directed downward to the inside of the container and extends approximately to the bottom of the container; on the other side of the container is a filler fitting comprising a check valve.

2. Embodiment of the device characterized in that, on the discharge fitting, a cap is screwed into the center opening to which the end of an intermediary tube is attached; said tube is provided with an outside thread to the external end of which the atomizing spray hose is attached, and on the inside end of which the tube, which extends down near the bottom of said container, is attached.

259
373

N° 1.404.299

M. Stamatov

2 planches. - Pl. I

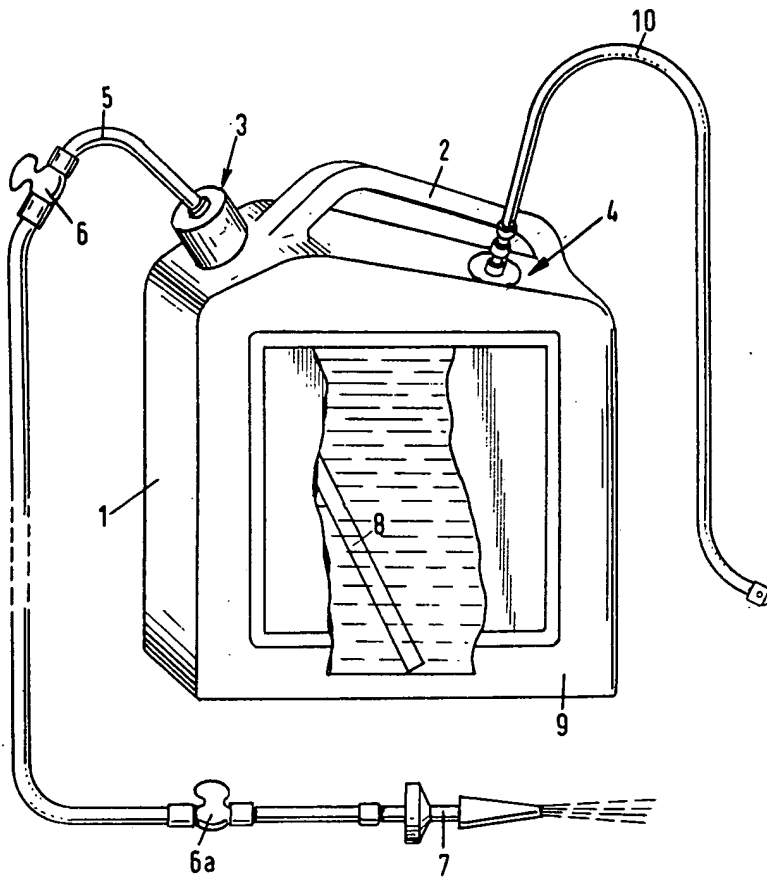


FIG. 1.

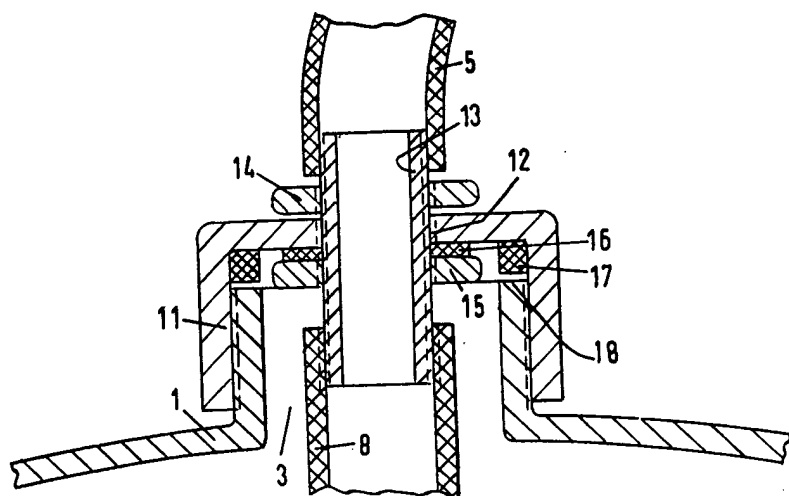


FIG. 2.

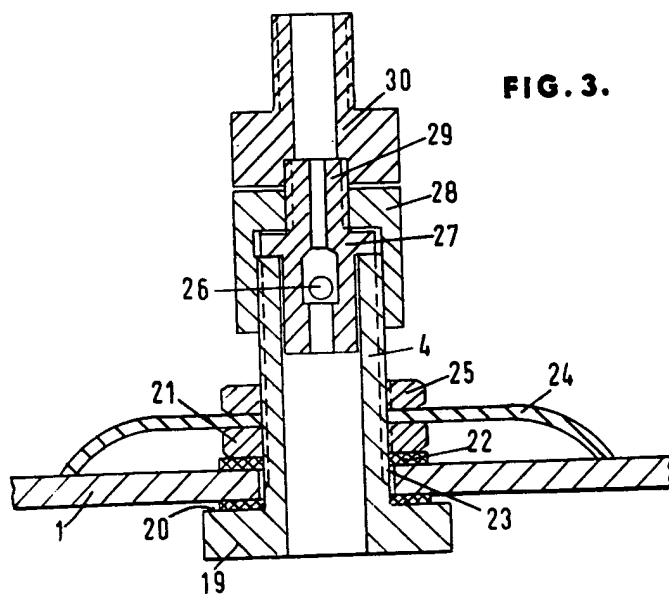


FIG. 3.